

Work Order ID 139026

Friday, November 13, 2015 11:16:33 AM

139026

Page 1

Item ID: D2892-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Support

Start Date: 11/13/2015 Start Qty: 15.00

15

Cust Item ID:

Required Date: 11/13/2015 Req'd Qty: 15.00

15

Customer:

Reference:

Approvals:

Process Plan: MCSDate: **NOV 17 2015**

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D2892

B

100

100

HAAS CNC VERTICAL MACHINING #1

0.00

HAAS 1

Memo

0.09

HAAS CNC vertical machine #1

1-Machine as per Folio FA082
2-Deburr10ØDAS
44
9-89

15/12/02

110

110

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

10ØDAS
44
9-89

15/12/02

120

120

QC8- Inspect parts - second check

0.00

QC

Memo

0.00

Quality Control

10ØDAS
14
9-89

15/12/16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :																							
Misidentified ☐	Past Due ☐																								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			

Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

Work Order ID 139026***139026***

Page 3

Friday, November 13, 2015 11:16:33 AM

Item ID: D2892-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Support

Stop ***NS2***

Start Date: 11/13/2015 Start Qty: 15.00

15

Cust Item ID:

Required Date: 11/13/2015 Req'd Qty: 15.00

15

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.02

Quality Control

MCS DEC 2 1 2015

MCS DEC 2 1 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																				
OTHER : _____																									

Picklist Print

Friday, November 13, 2015 11:16:33 AM

Page 1

Work Order ID: 139026

139026

Parent Item: D2892-1

D2892-1

Parent Item Name: Support

Start Date: 11/13/2015

Required Date: 11/13/2015

Start Qty: 15.00

Required Qty: 15.00

Comments:

IPP C02.11.26Added P/O KJ
 IPP D 08.03.19 Re-format EC verified by: DD IPP Rev:E
 11.08.04 as per dwg rev.B DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
DSK077		Manufactured	No			110	Each	5.0000	0.5	7.5			
DSK077									**				
D2892-1 Turning Detail													

DAS
44
9-89

15/12/02.

Location

Loc Qty

Loc Code

MAT060

5

116429

2

136661

3

2

3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

DART AEROSPACE LTD		Work Order: 139026
Description: Ø2.500 Support		Part Number: D2892-1
Inspection Dwg: D2892	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.115	0.150		.134	.135	.134	.134	.135
AB	0.290	0.310		.300	.300	.300	.300	.300
AC	0.040	0.060		.050	.048	.048	.049	.048
AD	0.115	0.150		.125	.125	.126	.126	.126
AE	0.240	0.260		.250	.250	.250	.250	.250
AF	0.188	0.193		.189	.189	.189	.189	.189
AG	0.240	0.260		.250	.250	.250	.250	.250
AH	1.116	1.156		1.145	1.146	1.146	1.143	1.146
AI	0.454	0.474		.461	.461	.462	.462	.462
AJ	0.240	0.260		.250	.250	.250	.250	.250
AK	0.053	0.073		.063	.063	.063	.063	.063
AL	0.257	0.262		.261	.261	.261	.261	.261
AM	1.663	1.683		1.675	1.677	1.675	1.675	1.675
AN	0.053	0.073		.063	.063	.063	.063	.063
AO	0.022	0.042		.032	.032	.032	.032	.032
AP	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AQ								
AR								
AS								
AT								
Accept/Reject				✓	✓	✓	✓	✓

Measured by:	DAS 44 9-89	Date:	15/12/02
Audited by:	DAS 14 9-89	Date:	15/12/16
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.01.31	Dwg Rev updated	KJ	
D	13.05.22	Dimensions updated	KJ	<i>[Signature]</i>

DART AEROSPACE LTD		Work Order: 139026
Description: Ø2.500 Support		Part Number: D2892-1
Inspection Dwg: D2892	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	6	7	8	9	10
HAAS Section								
AA	0.115	0.150		.134	.134	.134	.134	.135
AB	0.290	0.310		.300	.300	.300	.300	.300
AC	0.040	0.060		.047	.047	.048	.047	.048
AD	0.115	0.150		.126	.126	.126	.126	.126
AE	0.240	0.260		.247	.250	.249	.250	.250
AF	0.188	0.193		.189	.189	.189	.189	.189
AG	0.240	0.260		.250	.250	.250	.250	.250
AH	1.116	1.156		1.146	1.143	1.143	1.142	1.144
AI	0.454	0.474		.461	.462	.461	.462	.462
AJ	0.240	0.260		.250	.250	.250	.250	.250
AK	0.053	0.073		.063	.063	.063	.063	.063
AL	0.257	0.262		.261	.261	.261	.261	.261
AM	1.663	1.683		1.677	1.676	1.676	1.676	1.677
AN	0.053	0.073		.063	.063	.063	.063	.063
AO	0.022	0.042		.032	.032	.032	.032	.032
AP	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AQ								
AR								
AS								
AT								
Accept/Reject								

Measured by: 44 DAS	Date: 15/12/03
Audited by: 14 DAS	Date: 15/12/16
Preliminary Approval: 9-89	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.01.31	Dwg Rev updated	KJ	
D	13.05.22	Dimensions updated	KJ	

DART AEROSPACE LTD		Work Order: 139026
Description: Ø2.500 Support		Part Number: D2892-1
Inspection Dwg: D2892	Rev: B	Page 1 of 1

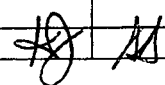
FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.115	0.150						
AB	0.290	0.310						
AC	0.040	0.060						
AD	0.115	0.150						
AE	0.240	0.260						
AF	0.188	0.193						
AG	0.240	0.260						
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AI	0.454	0.474						
AJ	0.240	0.260						
AK	0.053	0.073						
AL	0.257	0.262						
AM	1.663	1.683						
AN	0.053	0.073						
AO	0.022	0.042						
AP	2.779	2.789						
AQ								
AR								
AS								
AT								
Accept/Reject								

Measured by:	Date:
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Audited by:	Date:
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Preliminary Approval:	Date:
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Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.01.31	Dwg Rev updated	KJ	
D	13.05.22	Dimensions updated	KJ	

DART AEROSPACE LTD		Work Order: 139026
Description: Ø2.500 Support		Part Number: D2892-1
Inspection Dwg: D2892	Rev: B	Page 1 of 1

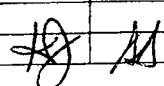
FIRST ARTICLE INSPECTION DIMENSION SHEET

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Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.115	0.150						
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AO	0.022	0.042						
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AQ								
AR								
AS								
AT								
Accept/Reject								

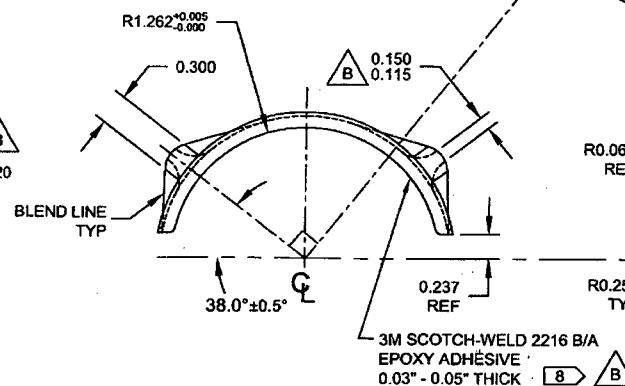
Measured by:	Date:
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Audited by:	Date:
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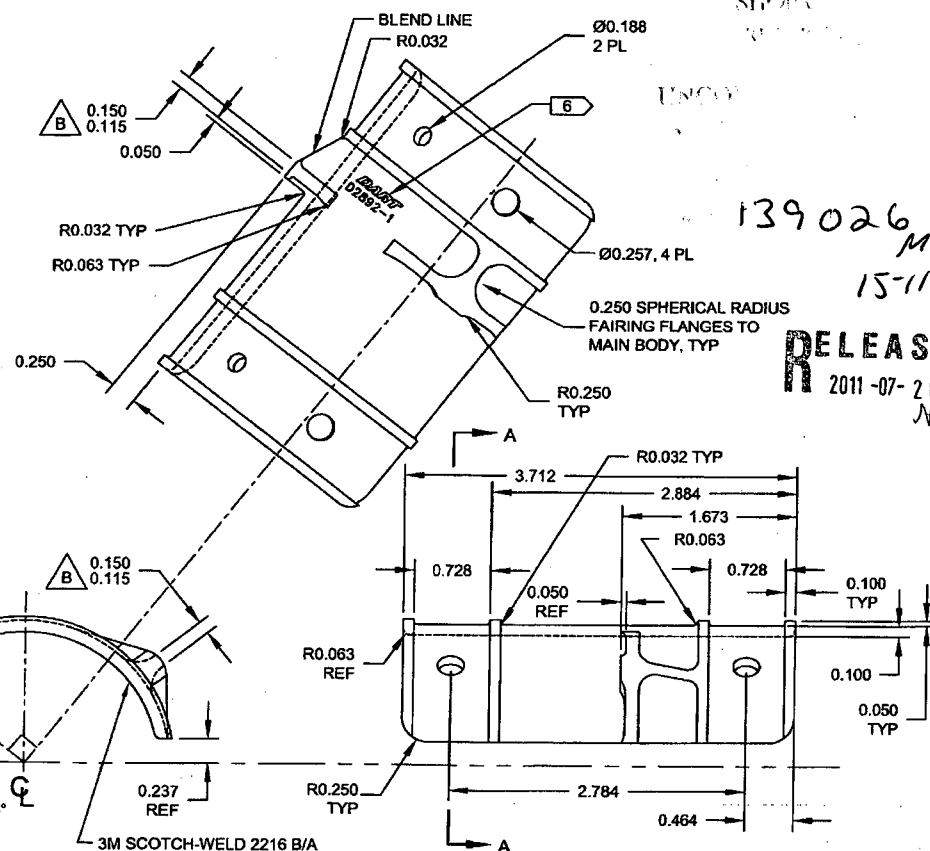
Preliminary Approval:	Date:
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A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.01.31	Dwg Rev updated	KJ	
D	13.05.22	Dimensions updated	KJ	

ABRADE SURFACE WITH 400-GRIT SANDPAPER. REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY 0.03" TO 0.05" THICK LAYER OF 3M SCOTCH-WELD 2216 B/A ADHESIVE TO MATING SURFACE OF SUPPORT. ALLOW TO CURE FOR 24 HOURS.



D2892-1 SUPPORT



B	RMV FINISH, ADD 3M 2216, ADD H925 MATL OPTION, UPDATE TOLERANCE (ZN D5-1,B5-1,B5-1)	CP	11.07.15
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV.
MFG. APPR.		D2892	SHEET 1 OF
APPROVED		TITLE	SCALE
DE APPR.		Ø2.500 SUPPORT	NT
DATE	11.07.15	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PROVIDED AS INFORMATION ONLY AND IS NOT GUARANTEED BY THE COPYRIGHT HOLDER. IT IS NOT TO BE USED FOR ANY PURPOSE OR FOR COMMERCIALISATION TO ANY OTHER PERSONS WITHOUT THE WRITTEN AND EXPRESSED CONSENT OF DART AEROSPACE LTD.	